

5.8 PALEONTOLOGICAL RESOURCES

Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal organisms, as well as the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. These resources are considered to be non-renewable resources significant to our culture under state and federal law.

In compliance with CEC Guidelines (CEC, 1992) and “Rules of Practice and Procedure & Power Plant Site Certification Regulations” (CEC, February, 1997), the paleontological analysis provided herein assesses whether significant paleontological resources exist in areas which could be adversely affected by the MPP. Measures are proposed to mitigate potential adverse effects of the project to any significant resources that may be present. These measures will be supplemented during the siting process when exact locations have been identified for the facilities requiring excavation during the construction phase.

Laws, ordinances and regulations pertinent to the identification, assessment of significance, and assessment of and mitigation of adverse effects to paleontological resources are identified in Section 7.5.8.

This paleontological analysis also complies with guidelines and significance criteria issued in 1994 by the Society for Vertebrate Paleontology (SVP), a national professional organization. These criteria outline acceptable professional practices in the conduct of paleontological resource surveys, data recovery, analysis, and curation. The paleontological resources assessment for this project was carried out by, or under the direct supervision of, Mr. David Lawler, a qualified paleontologist.

This section summarizes the technical report (Appendix K), “Paleontological Resources Assessment – Magnolia Power Project, Los Angeles County, California” prepared by Mr. David Lawler, Principal Investigator (February 2001). The technical report, which contains sensitive resource location information, is filed under separate cover with the California Energy Commission under a request for confidentiality.

A 1978 memorandum from Griswold E. Petty (then acting director of the U.S. Department of the Interior, Bureau of Land Management [BLM]) proposed the following guidelines to determine the significance of a paleontological resource.

- It provides important information on evolutionary trends, relating living organisms to extinct organisms.
- It provides important information pertaining to biological community development and zoological/botanical biota interaction.

- It demonstrates unusual circumstances in biotic history.
- A limited sample size, in danger of depletion or destruction by natural processes, vandalism or commercial exploitation, found in no other geographic location, exists.

Under CEQA guidelines, a significant effect on paleontological resources can occur when a proposed project will “directly or indirectly destroy...a unique paleontological resource.” In addition, all vertebrate fossils are categorized as being of significant scientific value, in keeping with the significance criteria of the SVP (1994).

Paleontological resources are classified as a non-renewable scientific-cultural resource and are protected most notably by the 1906 Federal Antiquities Act and other subsequent federal legislation and policies, and CEQA environmental provisions. Significant paleontological resources are defined in this report to include the interpretation outlined by the SVP (1994), wherein vertebrate fossils are considered significant.

5.8.1 Affected Environment

5.8.1.1 Overview

The MPP site is located in the western portion of Los Angeles County, at 164 Magnolia Boulevard, in the City of Burbank, Los Angeles County, California. Figure 5.8-1 depicts the project area, project components and areas subjected to paleontological literature search. The topography is very level and represents part of a coastal plain that extends south to the San Diego area. The project area is approximately 2.5 miles southeast of the Hollywood Burbank Airport and immediately west of the Golden State Freeway (Interstate 5). The site is bordered on the northwest by Magnolia Boulevard, northeast by the Burbank Western Channel and Interstate 5, southeast by Olive Avenue, and southwest by Lake Street. The proposed project consists of the installation of new equipment on an already existing power plant site. A detailed project description is provided in Section 3.0 of this AFC.

Central Los Angeles County contains a diverse record of geologic and biologic history, which spans more than 30 million years dating from the Miocene period. Under the combined influences of regional geologic and tectonic events, fossils of marine and terrestrial organisms have accumulated to produce a significant record of prehistoric life in this area.

Of greatest paleontological interest within the Los Angeles County region are the well-known discoveries of Pleistocene age fossil vertebrate faunas in both the Palos Verdes Sand and the San Pedro Formation. Preservation of nearshore marine, continental sedimentary deposits provided favorable conditions for preserving vertebrate fossil remains in these geologic units. These

diverse fossil vertebrate assemblages provide the best known record of late Pleistocene faunas in California.

Specific technical paleontological and detailed lithologic data were derived both from local geoscientist informants at California colleges and universities, and from designated museum repositories (Los Angeles County Museum [LACM] and California Academy of Sciences [CAS]). Paleontological resources are lithologically dependent; that is, deposition and preservation of paleontological resources are tied to the lithologic unit in which they occur. If the rock types representing a depositional environment conducive to deposition and preservation of fossils are not favorable, fossils will not be present. The potential for paleontological resources to be present is described as the “paleontological sensitivity” of the lithologic unit.

5.8.1.2 Paleontological Literature and Locality Records Review

Data for the following descriptions of paleontological resources within the project area were compiled by David Lawler, project paleontologist, from review of published records of previous geologic and paleontological investigations (see Section 5.8.5 for references). Data collection also included additional published descriptions of the geology, including geologic maps, unpublished paleontological research papers, museum records, and interviews conducted with individuals having first-hand knowledge of resources within the project area.

Sources consulted on the general geology of the area included regional geologic maps compiled by the California Division of Mines and Geology (CDMG) and more specific geologic information in the form of 1:24,000 and 1:62,500 scale U.S. Geological Survey (USGS) and CDMG geologic maps available for the project area.

Geologic map data covering the USGS Burbank Quadrangle 1:24,000 scale, and California Division of Mines and Geology, Los Angeles Sheet 1:250,000 scale have been used as the most recently published or currently available references for paleontological resource sensitivity and stratigraphic analysis.

Fossil locality records were reviewed and fossil specimens inspected (when possible) at the following institutions, which provided most of the data concerning distribution of known fossil resources:

- LACM: Dr. Samuel McLeod, Vertebrate Paleontologist, assisted with a paleontological resources record data search in February, 2001 (See confidential Appendix K(A)).

- University of California Museum of Paleontology, (UCMP): Ms. Pat Holroyd, Curator of Vertebrate Collections, was helpful in providing access to paleontological records and collections during February, 2001.

Collected data were reviewed to determine the geological units present in the project area, and to assess the relative potential for each of these geologic units to contain significant paleontological resources. These data assisted in a determination of appropriate field survey coverage.

5.8.1.3 Methods of Assessing Sensitivity

The assessment of paleontological sensitivity is based both on known paleontological sites near the project area, as well as extrapolated biostratigraphic information derived from rock units in adjacent areas or areas of regional context. Paleontological sensitivity of a particular site within the project area has been determined from the distribution of known nearby fossil localities, fossil-bearing geologic units, exposures on non-fossiliferous rocks, and available mapping of the surface outcrops of the different rock units; in combination with paleontological field survey as appropriate.

Geologic units (mappable rock formations) occurring within a 1-mile wide radius of the project area and their respective interpreted paleontological sensitivity are shown on Figure 5.8-1, and in Tables 5.8-1 and 5.8-2 as geologic contacts and specific sensitivity ratings. Known paleontological sites within or near the project area are depicted on Figure 5.8-1 in confidential technical Appendix K.

Paleontological Survey. Three categories of paleontological potential are used in this report according to CEC standards. Rating categories are to be considered interpretive and subject to change as new information is obtained. High potential, moderate potential, and low potential ratings are defined as follows:

- **High Potential Rating**

Rock units with a high potential for significant paleontological resources are known to have yielded vertebrate fossils within the project area or region. This does not necessarily imply that vertebrate fossils will always be recovered from a rock unit rated high-potential, but only that there are recorded occurrences within the unit. Additional factors that are considered pertain to inferred depositional environment and lithology.

TABLE 5.8-1
GEOLOGIC UNITS WITHIN THE PROJECT AREA

Symbol	Rock Unit	Age	Rating
(Qal) ¹	Alluvium	Pleistocene	(Mod-High)-(Known vertebrate fauna)
(Qpv)	Palos Verdes ²	Pleistocene	(High)-(Known vertebrate fauna)
(Qsp)	San Pedro ²	Pleistocene	(High)-(Known vertebrate fauna)

¹ (Qal) Alluvium – notation: While Quaternary alluvium deposits of Pleistocene age occur locally within the project area, usage of the Qal geologic symbol designation on available geologic maps covering the Los Angeles Basin region is highly variable. Geologic units ranging from the San Pedro Formation, Palos Verdes Sand, and Quaternary Stream deposits, may be lumped under this designation, particularly where regional geologic data is scarce, due to urban development. (See Jennings (1962) and Cleveland (1976) for comparison). Paleontological resources can potentially vary greatly in stratigraphic distribution within this grouping of geologic units.

² The Palos Verdes Sand and San Pedro Formation geologic units or their stratigraphic equivalents are believed to occur at depth in the project vicinity.

TABLE 5.8-2
GEOLOGIC UNITS AND PALEONTOLOGICAL SENSITIVITY
PLANT SITE AREA

Area	Rock Formation	Sensitivity Rating
3 Acres	<i>Qal</i>	Moderate to High
3 Acres	<i>Qpv</i>	High
3 Acres	<i>Qsp</i>	High

- Moderate Potential Rating**

Rock units possessing some degree of potential such as favorable depositional environment for resource preservation. Lithologically similar rock units in the region may have yielded vertebrate fossils.

- Low Potential Rating**

Rock units containing lithologies (e.g., coarse conglomerates, welded or ignimbrite volcanic ash deposits) that do not commonly preserve significant fossil resources. Igneous rocks, such as the granodiorite outcrops in the northern part of the project area, are precluded from preservation of paleontological resources, due to their genesis within a magmatic environment.

Mr. David Lawler, project paleontologist, performed the site assessment based on mapped data. The project site was not subjected to a pedestrian paleontological survey because the paved and developed condition of the entire site did not afford open exposures for observation of native substrate.

5.8.1.4 Findings

The sensitivity ratings determined through archival research and field survey are shown on Tables 5.8-1 and 5.8-2. It should be noted that sensitivity ratings change as paleontological surveys are undertaken and are added to the existing database. Identification of significant vertebrate or microvertebrate sites and materials of scientific significance can elevate a particular rock unit's paleontological resource rating.

5.8.1.4.1 Overview of Lithologic Units. Surficial sedimentary units of predominantly Pleistocene and Holocene age underlie the entire project area. These sediments include deposition that ranges from continental, alluvial fan-derived sediments to subaerial floodplain to marine terrace and near-shore deposits. Lithologies include sand, gravel, silt and clay; all of which are potentially favorable to the preservation of paleontological resources.

Pleistocene age geologic units occur as surficial deposits in the project area. Subsurface sedimentary deposits as old as Miocene age occur along the portion of the Los Angeles County Basin area in which the project is situated. These sedimentary units have been described and mapped previously by Dall (1898), Arnold (1903), Kiew (1923), Tieje (1926), Woodring et al. (1936), Brandy and Emery (1954), Poland and Piper (1956), Yerkes et al. (1965), Conrey (1967), Allen (1974), Cleveland (1976), and Reiter (1984).

Woodring et al. (1936) have described the geomorphic development of the successive series of Pleistocene marine terraces that have been subsequently dissected by the major west flowing river drainages. The lateral extent of these units has been determined from petroleum exploration and development by geological subsurface mapping (Wright 1987a, 1987b).

The Cenozoic rock formations range in facies type from conglomerates to sandstones to unconsolidated siltstone and clays, all of which are either fossiliferous or potentially fossiliferous.

Gradual, long-term erosion has removed parts of the Tertiary and Quaternary rock formations so that these rocks and their contained fossils are now at or near the surface throughout most of the project area. These formations or parts of the formations now exist as rock outcrops of varying width, but are obscured in most areas by industrial development and surficial sediments. Visual detection of fossils is possible in those areas where natural erosion or man-made

excavations, during road, pipeline, or building site excavations or grading operations, have removed artificial fill material. The majority of the project area is reportedly overlain by imported fill material or unconsolidated sediments of Holocene age.

Cenozoic Rock Units.

San Pedro Formations (Qsp) and Palos Verdes Sands (Qpv). The San Pedro Formation represents the oldest known Cenozoic sedimentary unit of Pleistocene age in the Los Angeles Basin-Coastal Region. This formation was originally described by Dall (1898) for outcrops at Harbor Hill, in the vicinity of nearby San Pedro Harbor, and then applied to extensive beds of unconsolidated sand containing abundant molluscan shells of Pleistocene age outcropping as far south as San Diego, and as far north as Santa Monica. The San Pedro Formation does not outcrop in the immediate project vicinity, but may occur subsurface (see Morton 1982 geologic map).

The formation name was redescribed by Arnold (1903) and Kiew (1923) in greater detail for beds in the vicinity of San Pedro. These researchers redefined the formation by dividing it into two members, separated by an unconformity.

Tieje (1926) formally defined the two stratigraphic members and assigned the name *Palos Verdes Sands* to the upper member of typical San Pedro Formation and restricted *San Pedro* or *San Pedro Sand* to the lower member of Arnold's San Pedro Formation.

It is important to note that in this report the stratigraphic nomenclature and redefinition of both the San Pedro Formation and Palos Verdes Sand of Tieje (1926) is followed, since this is the present definition approved by the USGS.

Tieje also describes the Palos Verde Sand as consisting of massive and loosely cemented marine sands varying from coarse sand to gravelly quartzose sands with pebbles. Maximum thickness in the Palos Verdes Hills section is 50 feet. Fossil sand dollars of the taxon *Echinarachnius exoentricus* are highly abundant and found in association with the Palos Verdes invertebrate fauna assemblage, which consists of at least 70 species.

The San Pedro Formation is characterized as consisting of poorly consolidated coarse sands and gravels, sandy silts, clays and silty clays. Over 75 percent of the formation is composed of sands and pebble to cobble gravels.

The La Brea Tar Pit fossil mammal assemblage of upper Pleistocene age is well known world-wide and is derived from the Palos Verdes Sand (upper part of Arnold's San Pedro Formation) in the northwestern portion of the Los Angeles Basin. This assemblage includes a wide variety of carnivores (canids and felids), small to large ungulate herbivores (cervids, antilocaprids,

camelids, equids, suids), edentates (sloths), and a myriad of small mammals including lagomorphs (rabbits), rodents, insectivores and a variety of birds and lower vertebrates (frogs, lizards and snakes). Many of the fossil specimens represent the best preserved specimens of particular taxa found to date.

The geology of the La Brea deposit has recently been described by Wright (1987a and 1987b) and Woodward and Marcus (1973). These workers have subdivided the Palos Verdes Sand into three members (units A, B and C) that document the gradual transition from deep water marine conditions to non-marine alluvial plain deposition in this area of the Los Angeles Basin. None of the scientific literature reviewed to date has recognized these subdivisions of the Palos Verdes Sand in the project area.

Nearly 75 years of fossil vertebrate collecting in the Los Angeles Harbor region has produced one of the most extensive databases for understanding the fossil vertebrate record of the Southern California coastal plain. Only the Newport Beach area of Orange County has yielded as much information on the Pleistocene coastal vertebrates of North America (Langenwalter 1975). The first record of a fossil vertebrate from this region was a fossil mammoth tooth from the San Pedro area, as reported by Blake (1855).

Mammalian assemblages collected from both the San Pedro Sands and Palos Verdes Sands in the vicinity of the project area within the San Pedro townsite contain fossil remains of most of the above mentioned Rancho La Brea terrestrial vertebrate groups, as described by Hay (1927) and Miller (1971). Also included at these sites are aquatic mammalian taxa including otter, whale, and dolphin as well as shark and teleost fish taxa, and birds.

Well-represented marine and shore birds faunas from both the San Pedro Sands and Palos Verdes have been described in detail by Miller (1914; 1930) and Miller and DeMay (1942). The most complete avian faunal record has been derived from the Palos Verdes Sand.

The bony fish (or osteichthyan fish) record from these formations has been extensively described by Fitch (1967; 1969; 1970). The 1967 paper compares the San Pedro Sand fish fauna with other modern faunas of this area and concludes (with some exceptions) that they are similar in composition, but that ocean temperatures were cooler than at present.

A composite invertebrate fauna collected from both rock units includes a diverse mollusc (pelecypod and gastropod) and echinoderm fauna. Many taxa identified to the family and genera taxonomic level are well represented. San Pedro Formation invertebrate faunas have been described by Woodring et al. (1936) and more recently by Kennedy (1975).

Artificial fill and cement materials at the MPP site are expected to have either removed or obscured potentially fossiliferous exposures of Quaternary Alluvium in some areas. Occurrence of these stratigraphic units at shallow depths is quite likely, given the known depths at which vertebrate fossils have been recovered in areas adjacent to the project site.

Quaternary Alluvium Deposits (Qal). While Quaternary alluvium deposits (*Qal*) of Pleistocene age occur locally within the project area, usage of the *Qal* geological symbol designation on available geological maps of the Los Angeles Basin is highly variable. *Qal* may include numerous geological units, such as stratigraphic equivalents of the Palos Verde Sand (*Qpv*), San Pedro Formation (*Qsp*), and Quaternary stream deposits (*Qt*). These units have yielded fragmentary remains of both large mammalian taxa including horse, bison, and mammoth, as well as the remains of microvertebrate taxa including rabbits, rodents and fish. (see LACM collection data in confidential Technical Appendix K(A)). The rock-unit lithologies would be favorable to the preservation of fossil resources such as large vertebrate and/or microvertebrate remains. Paleontological resources are known to vary widely in stratigraphic distribution within this generalized geologic unit.

While no paleontological resources are known from the project site, one paleontological site occurred within a 5-mile radius of it. The paleontological site designated as LACM 6970, exposed during excavation for the Metrorail Redline Universal City Tunnel, has yielded fossil vertebrate specimens from *Qal* deposits of Pleistocene age, in sediments of poorly consolidated sand, gravel and silt. Specifically, LACM 6970 has yielded fragmentary remains of large mammalian taxa represented by bison, camel and giant ground sloth (see collection data in confidential Technical Appendix K(A)).

This paleontological locality is typical of many scientifically important paleontological resources occurrences of Pleistocene age within the greater Los Angeles Basin area. The fauna represented includes a wide variety of terrestrial and aquatic vertebrate taxa (fossil horse, bison, rabbit and other rodent terrestrial mammalian taxa and fossil marine fish [flounder] taxa) (Langenwalter 1975; Jefferson 1991). The coarser rock-unit lithologies (gravel-type sediments) are generally more favorable to the preservation of large vertebrate fossils; sandstone, silt, and clay lithologies of the known Pleistocene age geological units are favorable for the exceptional preservation of vertebrate, microvertebrate, and invertebrate fossil resources.

No other projects with a designated paleontological component are known from the project vicinity. No previous field or literature surveys, sensitivity maps or paleontological reports are known to have been conducted or produced in relation to activities within or adjacent to the MPP site.

Holocene and Post-Holocene Age Sediments. Sediments of probable Holocene or post-Holocene age that form the thin, surficial cover in the project area are considered of limited paleontological interest and thus are regarded as inconsequential. These are represented by the younger alluvial unit, *Qoa*, which is considered a subset of the *Qal* geological unit.

5.8.1.4.2 OffSite Laydown/Parking Areas. All three temporary sites are covered by the same geologic formation as the MPP site. Their sensitivity will be the same as or similar to that of the MPP site. Thus, these sites are presumed to be of moderate to high sensitivity for the presence of paleontological resources, should there be excavation below any fill material that is present. No grading or excavation is planned at these sites.

5.8.1.4.3 MPP Site. The formation underlying the MPP site is assigned a moderate to high sensitivity rating for any excavations beneath existing asphalt and artificial fill material. The parcel is approximately 3 acres in size. It is located between Magnolia Boulevard and Olive Avenue, immediately west of Interstate 5 and the Burbank Western Channel. The MPP site is a built environment and has zero percent ground visibility.

5.8.1.4.4 Temporary Use Sites. The formations underlying the temporary use sites are assigned moderate to high paleontological sensitivity rating for any excavations beneath existing asphalt and artificial fill. All three temporary use sites are located along the Southern Pacific Railroad alignment, zero to 2 miles north of the plant site. Sites 1 and 3 are completely paved. Site 2 has 100 percent ground visibility and has been graded level. Historic fill material may be present in association with the adjacent railroad berm.

5.8.2 Environmental Consequences

Often only monitoring during excavation can reveal the paleontological content of a formation at a specific impact location. However, for the purposes of this analysis, and in keeping with CEC guidance, the assumption is made that “if the rock units in the geologic formations which are to be disturbed have a high or moderate potential to contain fossil materials, these formations are considered likely to incur impacts” (CEC, 1992:3.10-5).

Project related excavation activities have the highest potential to unearth and impact paleontological resources. With implementation of the Applicant-proposed mitigation measures described in Section 5.8.3, no significant impacts on paleontological resources are anticipated. However, the potential exists for paleontological resources to be discovered. Hence, there is potential for adding to what is already known of paleontological resources in the project area through their recovery and evaluation.

5.8.2.1 Offsite Laydown/Parking Areas

Two of the three temporary use sites are located on existing paved areas, and no excavation is anticipated. Site 2 is unpaved but graded and may be covered with fill or gravel. No excavation is anticipated. Moderate to high paleontological sensitivity ratings are assigned to the underlying formation at all three sites. Unless disturbance activities penetrate below the surface disturbance zone and/or artificial fill layer, paleontological impacts are unlikely at these locations.

5.8.2.2 Power Plant Site

Virtually the entire power plant site is paved and contains a highly developed industrial infrastructure. The MPP site overall has moderate to high paleontological sensitivity based on geologic mapping, but was not subjected to on-the-ground assessment because of the lack of exposed soils. Within the MPP site, paleontological sensitivity is low on the surface because of the presence of asphalt and possibly artificial fill, but is moderate to high subsurface. Onsite utility trenches and other plant components slated for excavation beneath the asphalt and artificial fill have the potential to impact paleontological resources.

5.8.2.3 Indirect and Cumulative Impacts

The construction, operation and maintenance of the MPP are not expected to result in significant new indirect impacts to the paleontological resource base. As described above, construction-related activities could result in impacts to previously unidentified paleontological resources. Mitigation for such impacts is detailed below. A program of workforce education prior to project construction, and paleontological monitoring/sensitive area demarcation during construction, will ensure that indirect impacts from looting or inadvertent disturbance by construction equipment will be minimized. These programs are described above and are also typically detailed in a mitigation and monitoring plan and workforce education plan that would be prepared by the Applicant prior to project construction.

Cumulative impacts from the MPP on the regional paleontological base are limited because implementation of the mitigation measures proposed above for paleontological resources will reduce project-related impacts to a less-than-significant level. Scientifically controlled recovery at significant paleontological sites and/or site avoidance ensures that the information content of significant paleontological resource sites will be retained. In turn, this limits the contribution of cumulative impacts of the MPP on the regional paleontological resources base for this project.

5.8.3 Mitigation Measures

The literature search and field assessments already completed and the subsequent mitigation measures described below will minimize potential impacts of the project upon paleontological resources.

5.8.3.1 General Measures

The literature review has not identified any specific known fossil localities that would appear to be affected by the proposed project. A field survey was not conducted since there are no surficial exposures. The greatest potential for a discovery will occur during new ground disturbing activities associated with construction. Based on the sensitivity of the underlying formations the most prudent course appears to involve construction monitoring coupled with the mitigation measures provided below. Specific monitoring recommendations are also provided below.

The following mitigation measures are presented as general measures to be implemented during construction:

PA-1: Designated Paleontological Resource Specialist. Prior to the start of construction, the project owner will provide the CEC with the name and qualifications of its designated paleontological resources specialist and mitigation team members. The paleontologist will be responsible for implementing the following measures and for using qualified personnel for these tasks.

PA-2: Draft Paleontological Resource Monitoring and Mitigation Plan. Prior to the start of project construction, the designated paleontological resource specialist will prepare a draft Paleontological Resource Monitoring Mitigation Plan to identify general and specific measures to minimize potential impacts to sensitive paleontological resources, for review by the CEC project manager. Upon approval by the CEC project manager, the paleontological resource specialist will be available to implement the plan.

PA-3: Reduction of Impact through Design Modification. If a paleontological locality is discovered in a direct impact area, an attempt will be made to modify facility design or placement to avoid the impact. Modifications could include minor rerouting of onsite subsurface utility alignments.

PA-4: Protection During Construction Through Access and Construction Restrictions. If a significant paleontological locality is discovered near a direct impact area, the resource will be protected during the construction period through temporary or permanent measures which may include construction period covenants against vehicular traffic and excavation within the locality, and/or permanent or temporary fencing. Measures of this type will be incorporated in the mitigation monitoring plan noted above, for review by the CEC prior to construction.

PA-5: Construction Crew Education. Prior to the beginning of construction, a paleontologist will meet with contractor personnel to provide them with information on the appearance of fossils, research values, and regulatory responsibilities. The crew will also be briefed on procedures to follow in the event that a potentially significant fossil locality or fossil find is uncovered during construction. The contractor briefing will be videotaped for education of new personnel, as applicable.

PA-6 Emergency Discovery Procedures. In the event that fossils are uncovered during construction and a paleontologist is not onsite, work in the vicinity will halt and a paleontologist will be called. The paleontologist will examine the find and assess its significance in accordance with the resource significance criteria discussed above. If the resource is determined to be significant, unavoidable impacts will be mitigated through data recovery or other means, in consultation with the CEC and project owner. Mitigation measures could include data recovery, or “set aside” and long-term protection for another similar resource outside the impact zone.

PA-7: Paleontological Monitoring, Construction Period Sampling, and Data Recovery. A paleontologist will perform field inspections during initial groundbreaking, and then monitor excavation at facility locations in areas that have been confirmed through field inspection to have high or moderate sensitivity. If excavations bring paleontological materials to the surface, a paleontologist will be provided the opportunity to collect samples for data recovery and analysis. In the event that a major significant find is uncovered, emergency discovery procedures described above will also apply.

PA-8: Final Paleontological Resources Report. The project owner will ensure preparation of a Final Paleontological Resources Report by the designated paleontological resources specialist if significant fossils are found and recovered during project activity.

5.8.3.2 Offsite Laydown/ Parking Areas

Due to the moderate to high sensitivity rating of the formation underlying the project vicinity, assuming that the laydown and parking areas are located in the project vicinity, it is possible that significant paleontological resources may occur below surface. If any groundbreaking activities

are proposed for laydown and parking areas, monitoring of excavation activities by a paleontologist is recommended.

5.8.3.3 MPP Site

Due to the moderate to high sensitivity rating of the formation underlying this site, there is a moderate to high potential for significant paleontological resources to occur below surface. It is possible that previously unidentified paleontological resources present on the plant site could be disturbed or destroyed during construction as the result of excavation activity. Monitoring by a paleontologist of initial excavation activities, and subsequent periodic inspection by a paleontologist of any deep excavation is recommended. Monitoring will be conducted in compliance with the monitoring and mitigation plan developed under Mitigation Measure PA-2, above.

5.8.4 Applicable LORS

The applicable LORS for the evaluation and protection of paleontological resources are summarized in Table 5.8-3. The mitigation measures described in the above sections will result in project conformance with the regulations and the intent of the applicable LORS, which are also detailed in Section 7.0 of this AFC.

At this time no permit requirements have been identified at the federal, state, or local level for the performance of any paleontological work that may subsequently be required during the construction or operational phases of the project.

TABLE 5.8-3**APPLICABLE LAWS, ORDINANCES, REGULATIONS, AND STANDARDS**

Administering Agency	AFC Section	Authority	Requirements/Compliance
Lead Federal Agency*	5.8	1978 Memorandum from the Associate Director of the US BLM.	Implement significance criteria for paleontological resources.
State			
CEC	Paleontology: 5.8.2, Appendix K-2, L-6, L-7	CEQA Section 15064.5; California Public Resources Code Sections 5024, 5024.5, and 21083.2; Title 14, CCR Section 15126.4	Formal findings by the lead state agency regarding project-related effects to important paleontological resources.
Local			
Los Angeles County Mr. Lee Stark (213) 974-6467	5.8.3	Los Angeles County General Plan (Los Angeles County 1980).	Provides policies to protect and identify historical, archaeological, paleontological, geological and significant architectural structures.
City of Burbank Joy Tuncay (818) 238-5250	5.8.2 5.8.3	City of Burbank Planning Department	The city follows all provisions of CEQA and requires notification of significant paleontological findings to the administering city or state agency.

* This project is not a Federal undertaking at this time and is not expected to trigger any of the federal LORS described herein.
No project facility will be located on federal land.

5.8.5 References

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**Figure 5.8-1. PALEONTOLOGICAL SENSITIVITY MAP
SURFICIAL GEOLOGICAL UNITS
LAWLER AND ASSOCIATES**

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